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| 10/564,102                       | 06/19/2006  | Thomas Klettke       | 58741US004          | 7195             |
| 32692                            | 7590        | 02/02/2010           |                     |                  |
| 3M INNOVATIVE PROPERTIES COMPANY |             |                      |                     |                  |
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| ST. PAUL, MN 55133-3427          |             |                      |                     |                  |
| EXAMINER                         |             |                      |                     |                  |
| YOON, TAE H                      |             |                      |                     |                  |
| ART UNIT                         |             | PAPER NUMBER         |                     |                  |
| 1796                             |             |                      |                     |                  |
| NOTIFICATION DATE                |             | DELIVERY MODE        |                     |                  |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

LegalUSDocketing@mmm.com

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### Office Action Summary

**Application No.**

10/564,102

**Applicant(s)**

KLETTKE ET AL.

**Examiner**

Tae H. Yoon

**Art Unit**

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 December 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 and 7-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 7-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/GS/US)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The claims 17, 19, 21, 23 and 25 are not commensurate in scope with an enabling disclosure until the named groups for "substituted" in said claims as described in the instant specification, are recited in the claims for "substituted". If there are no examples for "substituted", in the instant specification, "substituted" must be cancelled because the specification is not enabling for the skilled artisan to practice the invention. It would require undue experimentation to determine all of the groups which are encompassed by "substituted" and how to attach these groups to the claimed compound.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 and 7-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eckhardt et al (US 2003/0153726 A1) in view of Schmitt et al (US 4,167,618).

Rejection is maintained for reason of record with following response.

First, an amount of the diluents (0-70 wt.%) which overlaps the instant amount is taught in pp [0033] of Eckhardt et al. Thus, the recited amount in claims 16, 18, 20, 22

and 24 would be a *prima facie* obviousness. Schmitt et al further teach the instant alkyl sulfonium salts as an initiator for aziridine compounds in abstract and examples.

Applicant asserts that Eckhardt et al teach amides of alkylsulfonic acids and arylsulfonic acids as the inert diluents, but how one call the same compound is immaterial since one can be his own lexicographer. The first point here is whether Eckhardt et al teach the use of amides of alkylsulfonic acids and arylsulfonic acids or not, and the answer would be "yes". Thus, the next point is whether choosing the instant formulas would be obvious or not, and the answer would be "yes" also. Applicant asserts that choosing the instant formulas with various functional groups and optional substituents would not be obvious, but choosing every compound covered by said formulas would not be needed and choosing simplest form of the compound (such as having  $\text{SO}_2\text{-NH}_2$ ,  $\text{SO}_2\text{-NHR}$  or  $\text{SO}_2\text{-NR}_2$ ) falls within scope of said formulas would meet the invention.

Again applicant asserts unexpected result based on the filed 1.132 declaration and Entry 14 of Table 6 of specification, but they are insufficient to overcome the rejection for following reasons:

1. Applicant asserts the improved speed of set, but any particular or absolute property value for said improved speed of set is neither disclosed nor claimed. Thus, such improvement would be subjective, not objective, to one skilled in the art. The data for Entry 15 ( $\text{SO}_2\text{-NR}_2$ ) shows basically very similar Shore-A-Hardness after 15 minute as for Entry 13 ( $\text{SO}_2\text{-NHR}$ ) and Entry 14 ( $\text{SO}_2\text{-NH}_2$ ), even though the initial values (6, 8 and 10 min) for the data for Entry 15 ( $\text{SO}_2\text{-NR}_2$ ) is little less than those for Entry 13 ( $\text{SO}_2\text{-NHR}$ ) and Entry 14 ( $\text{SO}_2\text{-NH}_2$ ). Again, a higher Shore-A-Hardness after 6 or 8

minutes is neither disclosed nor claimed, and as a matter of facts, the data for Entry 15 ( $\text{SO}_2\text{-NR}_2$ ) shows an initial (6, 8 and 10 min) higher Shore-A-Hardness than one without any sulfonamide (Entry 10 in Table 5). Thus, all of said simplest form of the compound (such as having  $\text{SO}_2\text{-NH}_2$ ,  $\text{SO}_2\text{-NHR}$  or  $\text{SO}_2\text{-NR}_2$ ) yielded the improved speed of set.

2. Again, a comparison must be based on the closest prior art and not on applicant's own choice, especially in view of the fact that the instant claim recites "comprising" which permits presence of other components such as antacid-acting compound taught by Eckhardt et al. Thus, the data in said 1.132 declaration ( $\text{SO}_2\text{-NHR}$  vs.  $\text{SO}_2\text{-NR}_2$  ) have little probative absent an antacid-acting compound.

Claims 1-4, 7-11, 13-16, 18, 22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zech et al (US 6,894,144 or WO 01/17483).

Rejection is maintained for reason of record with above and following response.

An amount of the diluents (0-95 wt.% or 10-90 wt.% or 40-85 wt.%) overlapping the instant amount would be a *prima facie* obviousness contrary to applicant's assertion.

Claims 1-4, 7-11, 13-19 and 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zech et al (US 6,894,144 or WO 01/17483) in view of Schmitt et al (US 4,167,618).

The instant claims further recite alkyl sulfonium salts as an initiator over Zech et al. Schmitt et al further teach the instant alkyl sulfonium salts as an initiator for aziridine compounds in abstract and examples.

Thus, it would have been obvious to one skilled in the art at the time of invention to utilize the initiator of Schmitt et al in Zech et al since said initiator would provide a faster polymerization or curing of said N-alkylazirino polyether and since use of two-part would be obvious design choice to one skilled in the art and since both prior art teach a separation of the initiator and catalyst from N-alkylazirino polyether component during storage and since use of said initiator in the composition of Zech et al would have the instant working time absent showing otherwise.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tae H. Yoon whose telephone number is (571) 272-1128. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tae H Yoon/  
Primary Examiner  
Art Unit 1796

THY/January 27, 2010